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## **Abstract of the Disclosure**

2 A training system using haptically enhanced simulations of dental procedures to  
3 provide the sensorimotor involvement needed for dental training. To provide touch  
4 feedback in combination with a realistic visual experience, the system integrates a haptic  
5 stylus interface for simulating the movement and feel of the tool-tip with a three-  
6 dimensional, stereoscopic display. The haptic stylus enables the dental student to orient  
7 and operate simulated dental tools. Working on a virtual model viewed in a stereo  
8 display, dental students can use a simulated pick to probe a tooth, or a simulated drill to  
9 prepare a tooth for cavity repair. The touch feedback is simulated by representing these  
10 dental instruments as force-to-a-point tools which map to haptic simulation procedures  
11 executed on a computer workstation that also provides the visual display.